

**DISK OPTIMIZER VERSION 2.0**



**SOFTLOGIC**  
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**Documentation Additions****Scope**

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The material in this document describes the changes and additions made to the Disk Optimizer software package from SoftLogic Solutions, Inc. and is copyright 1986. Use this material in conjunction with your original Disk Optimizer user's guide. Whenever the subject matter overlaps, the material in this document supercedes that in the manual.

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The new Disk Optimizer software is provided to you without copy protection in consideration of your rights as a user, and because of our desire for you to be a satisfied customer of SoftLogic Solutions.

You still are limited to using each copy of the software on ONLY ONE PC. Your license agreement permits you to install the Disk Optimizer software onto just one hard disk drive, and make no more than three diskette copies for backup and archival purposes.

You will therefore want to destroy any copies of the old software completely. BUT, since the old Disk Optimizer was copy protected, some of its files were marked "hidden" on your disk. This makes it a little more difficult to delete them, so we have set up the installation process to automatically delete the "hidden" files from the old Disk Optimizer software as you are installing the new software.

For this reason, you will want to install the new Disk Optimizer software into exactly the same place (sub-directory) on your hard disk as the old Disk Optimizer software.

For your convenience, we have made the installation instructions for the new Disk Optimizer exactly the same as for the older Disk Optimizer. Therefore, you simply follow the instructions in section 1.2 of your Disk Optimizer user's guide in order to complete the installation. Similarly, the un-install procedure is identical to that which is outlined in section 1.2 of the user's guide.

## Overview of Changes

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1. Now you can see exactly what the Optimizer is doing all the time. An indicator tells which part of the process is occurring, as well as how much remains to be done. A cluster by cluster "trace" display has been added to show you exactly what is happening during each part of the optimizer's processing. A summary report about your disk and the optimization run is given when the OPTIMIZE program finishes.
2. Support has been added for a special options file (OPTIMIZE.OPT) which is used to direct certain advanced features of the Disk Optimizer software, including directory prioritizing, specifying "permanent" file types, and enabling and dis-enabling the trace and verify functions.
3. You can greatly enhance the response of any program by giving it priority placement on the disk to shorten access time. You can specify priority treatment for your most used directories, and the Optimizer places them first on your disk for absolute quickest access.
4. Disk Optimizer will now "map out" clusters on your disk which have gone bad. If the clusters contain no information, Optimizer will simply mark them as bad sectors and notify you at the end of the optimization run. If the bad clusters contain data, Optimizer will notify you of the file name which contains the bad data, and allow you to attempt recovery before proceeding.
5. Batch Operation fully supported. Run the Optimizer as part of a BATch, specifying the drive to be optimized; Optimizer sets the BATch ERRORLEVEL if the run is not successful. This same support has also been added to the LOCK and UNLOCK programs.
6. Colors have been added to all displays, for those with color monitors. The FILEPEEK program is faster, and supports drive and file naming from the DOS command prompt.
7. Several BUGS have been fixed in the OPTIMIZE program which could cause lost information using the old version under certain unusual circumstances involving "hidden" sub-directories.

## How to Use the Disk Optimizer Options File, OPTIMIZE.OPT

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The new Disk Optimizer software, version 2.00, supports the use of an options file to control its functioning. Entries made in this file can cause the Disk Optimizer to perform the following:

- \* Priority placement for specific directories, so that they will get the fastest possible response.
- \* Grouping of "static", unchanging files (such as your programs themselves) at the beginning or end of the disk.
- \* Short form operation of the OPTIMIZE, performing only the de-fragmentation; not grouping or optimizing layout.
- \* Suppression of the Optimizer's "trace" display, which normally details the progress of the optimization.
- \* Cancelling the "read-after-write" verification for disk information, for faster operation on reliable drives.

This control file, which you name OPTIMIZE.OPT when you are creating it, is simply an ASCII text file containing each command on lines separated by a carriage return (ENTER) key. You can create such a file in a variety of ways, using your favorite text editor, or the DOS utility functions "COPY CON ... " or EDLIN.

The OPTIMIZE.OPT file must be located in the same directory, and on the same disk as the Disk Optimizer software when you start it; that is, it must be in the same place as the files OPTIMIZE.EXE and OPTIMIZE.PGM.

The sequencing of the lines in the OPTIMIZE.OPT file does not matter. Entries can be in any order, so long as they are each on a separate line.

NOTE: Each option statement must be at the beginning of a line in the options file. Only the first two characters of each one word command is required, and only the initials of the two word commands.

## The Commands You Can Give in the OPTIMIZE.OPT File.

### \* Priority Placement for Specific Directories.

You may now specify placement for some of your directories so that their contents are placed at the physical beginning of the disk, closest to the file allocation table (FAT) for quickest access. This feature is used to control the order of first level subdirectories on disk. To give the command, you simply list the names of your sub-directories (for which you want special treatment), each separated by a comma, following "DIRECTORIES =".

#### Command Syntax:

```
DIRECTORIES = 123,ws,sk,mltmt (list of subdirectories)
```

If more than one line is required, the DI= must begin each new line of directory names.

```
* * * * *
```

### \* Cancelling "Read-After-Write" Verification

In normal operation, the Disk Optimizer will perform a read of information which it has just written for verification that the transfer to the disk was completed properly. In some cases, this may not be required.

If your disk drive is extremely reliable, then you may wish to disable the "read-after-write" verification so that the optimization will complete more quickly. You may also wish to use this option if you have a tape or cartridge backup made before you start the optimization.

#### Command Syntax:

```
NO VERIFY
```

You may also place the statement VERIFY in the OPTIMIZE.OPT file. This simply re-states the default, which is to perform the read-after-write verification.

#### Command Syntax:

```
VERIFY
```

```
* * * * *
```

### \* Grouping "STATIC" Files on the Disk.

Some files on your disk will not become fragmented from use, since they are never written, only read. Examples of these unchanging, or STATIC, files are your programs themselves, as well as certain data files which are for reference purposes only.

The Disk Optimizer software will automatically group many of these files at the beginning of the disk, so that once placed, they will probably not need to be moved again by subsequent optimizes, therefore making subsequent runs finish faster.

Disk Optimizer decides which files to treat in this fashion according to their file extension. Unless you have an OPTIMIZE.OPT file, Optimizer will treat these file extension types as static files, and place them at the beginning of the disk:

```
EXE COM PGM OVL SYS
```

However, if you create and use an OPTIMIZE.OPT file then this default feature is disabled. But, you can specify in the OPTIMIZE.OPT file a statement which would cause any or all of these file types, as well as others of your choosing, to be grouped together on the disk. Through the use of an additional statement, the END statement, you can cause these files to be grouped together, but at the physical end of the disk.

Placing these files at the end of the disk can be especially useful when you are using DOS 3.X, or if your disk is more than 70% full.

#### Command Syntax:

```
STATIC = .com.exe.ovl.pgm.arc (list of file extensions)
```

```
-----  
END  
STATIC=.COM.EXE.OVL
```

If more than one line is required, the STATIC = must begin each new line of file extensions. Please note that each file extension begins with a period (.) for separation.

#### Examples:

```
STATIC=.exe.com
```

```
-----  
STATIC=.EXE.COM.OVL.PGM  
STATIC=.BAS.DRV.LIB  
END
```

If the END verb is present, then all files with extensions defined with the STATIC command will be placed at the physical END of the disk, instead of the beginning.

```
* * * * *
```

#### \* Short Form Operation of OPTIMIZE.

Placing the command FAST in your OPTIMIZE.OPT file causes the Disk Optimizer to perform only the de-fragmentation process; it will not perform the grouping or optimizing layout functions. It is suggested that this form of the disk optimization be run only as an interim measure, until you can perform the full optimize function. This option can be helpful in the case where you have one or more very large files which are used and fragmented daily.

#### Command Syntax:

FAST

\* \* \* \* \*

#### \* Suppression of the Optimizer's "TRACE" Display.

Using the NO TRACE option, you may disable the Disk Optimizer's "trace" display, which normally details the progress of the optimization. This might be desirable if the OPTIMIZE function is being run as part of a Batch process. There is no distinguishable difference in the speed of the optimization with this feature disabled, so it is purely a matter of aesthetics.

#### Command Syntax:

NO TRACE

\* \* \* \* \*

#### Sample OPTIMIZE.OPT Files

This sample groups several directories at the beginning of the disk, and places the permanent (static) files at the end of the disk; the trace feature is disabled.

```
DIRECTORIES=WORDSTAR,LOTUS,DBASE,AUTOCAD
DI=EDIT,SHEAR,PWR,MASM
STATIC=.EXE.COM.CVL
ST=.LIB,BAS,PIF,PRG
END
NO TRACE
```

This sample also groups a few directories at the beginning and the permanent files at the end of the disk; the read-after-write verification is disabled.

```
dir=edit,comm,dbase
st=.com.prg.lib
end
nv
```

#### BATch File Operation of the OPTIMIZE Program

The OPTIMIZE program has been enhanced to facilitate batch file operation. Specifically, you may now provide the drive letter to be optimized from the DOS command line, from a batch file. In order to accomplish this, you simply follow the word OPTIMIZE with the drive designation, including the colon.

#### Example

OPTIMIZE C:

In addition, the OPTIMIZE program will now set the DOS ERRORLEVEL flag, which you may interrogate in your batch file. ERRORLEVEL will be set to one (1) if the optimization is not completed successfully.

#### Recovery Procedure from Hardware Errors on Your Drive

Sometimes, a cluster (or a portion of one) may be marginal at the time you originally format the disk. The format process is supposed to test each portion of the disk, and "map out", or mark as bad any clusters which are unusable. Occasionally, one of these clusters will "fade" during continued use, and will eventually go bad, or become extremely marginal.

If the OPTIMIZE program detects such a cluster on your disk during the optimization process, and that cluster contains information, the OPTIMIZE program will tell you that there has been a disk error, and name the file involved. This gives you the opportunity to attempt to save the information which is in that file, using the DOS COPY command, or a utility program which provides similar functioning. This can often be completely successful, especially if the cluster was only marginal.

If you encounter such a condition, save the file if you can, and then delete it from your disk, using the DOS DEL or ERASE command, or a utility program which performs a similar function. Then, re-run the OPTIMIZE program, and it will mark this cluster as "bad", and permanently remove it from use on the disk.

#### Miscellaneous

##### \* Run-time Switches.

The OPTIMIZE program permits you to specify several of its options using a run-time switch which is typed following the program name at the DOS command line. You may disable the trace and/or verify functions, as well as enable the "fast" mode using this method.

The switch /V is used at run time to disable the "read-after-write" verify function (described previously in this

document). The switch /T is used to disable the trace feature, and the switch /U is used to specify that the fast mode (un-fragment only) is desired. None of these switches are case-sensitive; that is, you may use either the upper or lower case of the letter for the switch.

You may combine any of these switches, as desired. In a case where a run-time switch is provided, AND there is a conflicting command present in the OPTIMIZE.OPT file, then the value in the OPTIMIZE.OPT file takes precedence over the switch value.

Examples:

You type:

OPTIMIZE/V  
OPTIMIZE/V/U  
OPTIMIZE/V/U/T  
OPTIMIZE C: /V/U/T

You get:

disables verify function  
no verify, and only unfragments  
no verify or trace, and short form  
same as above, but for drive C:

\* Program to Erase Hidden Files.

The original Disk Optimizer diskette which you received was a copy-protected disk, which utilized a commercial copy protection system called SuperLok from Softguard Systems. When you install the software onto your hard disk, up to three (3) files are placed in your root directory which are marked as "hidden" to prevent their inadvertent erasure. This same protection makes these files a little difficult to get off the disk.

If you un-installed the Disk Optimizer software before sending for your upgrade, then all of these files were removed automatically. If you did not un-install, then these files are probably still on your disk, assuming you haven't re-formatted it.

You may simply want to leave these files alone, as they will not cause you any particular difficulty. This is the safest approach, and simply means that a little space on your hard disk will be squandered.

We have provided you with a specific program, KILL\_HID, to get rid of two of these files, if they are still on your disk. The third one, named OPTIMIZE.EXE, is removed for you during the installation process for the new Disk Optimizer software, which also includes a file called OPTIMIZE.EXE. The reason that the other two are not removed automatically is because these other two are SHARED by any other program installed on your disk which uses the same copy-protection system. We would not want to remove them and render some other software on your disk unusable!

Before you use this program, you must be sure that you have un-installed any other copy-protected software from your disk which might utilize the same SuperLok protection. Because the two files are shared by all programs using identical protection, you must un-install, or when you attempt to use the other software you will find it no longer functions.

If you are unsure about whether you should use this program or not, go ahead and start it up. It will prompt to be sure you want to run, and then request the drive letter. If there were the same type of programs present, KILL\_HID will tell you how many. If Disk Optimizer was the only one, then you may proceed without worrying. If more than one program was once present, you will need to un-install the other programs, run the KILL\_HID program, and then re-install the other protected programs.

## **BATch File Operation of the LOCK and UNLOCK Programs**

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The programs LOCK and UNLOCK have been enhanced to facilitate batch file operation. Specifically, you may now provide the drive letter and file name to be (un)locked from the DOS command line, from a batch file. In order to accomplish this, you simply follow the word (UN)LOCK with the drive designation, including the colon and the directory path, and the name of the file, or group of files.

### **Example**

```
UNLOCK C:\123\*.WKS
```

In addition, these programs now set the DOS ERRORLEVEL flag, which you may interrogate in your batch file. ERRORLEVEL will be set to one (1) if the (un)lock operation was not completed successfully.

## **FILEPEEK Supports Command Line File Entry**

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The FILEPEEK program has been enhanced in several ways. First, the speed of its displays have been increased over earlier versions. Second, you may now supply any or all of the drive, directory path, and file name from the DOS command line. This is handy if you are going to look at a specific file and don't want to have to climb through the prompts to get there.

### **Examples:**

You type:                            You select:

FILEPEEK C:\123\123.EXE	specific drive, path, & file
FILEPEEK A:	specific drive only
FILEPEEK \PT\	specific directory on default drive